

WHAT IS CLAIMED IS

1. Footwear comprising a sole having:
  - (a) a heel section for supporting a heel of the foot, said heel section having medial and lateral regions, at least a portion of the lateral region of the heel section having a first compressive resilience for attenuating the shock of impact to the wearer during running and walking;
  - (b) an arch section forward of the heel section for supporting an arch of the foot, said arch section having medial and lateral regions, at least a portion of the lateral region of the arch section having said first compressive resilience, and at least a portion of the medial region of the arch section having a second compressive resilience harder than said first compressive resilience for providing firm support for the foot during running and walking; and
  - (c) a forefoot section forward of the arch section for supporting a ball of the foot including first, second, third, fourth and fifth metatarsal heads and associated metatarsal necks, proximal phalanges and metatarsal phalangeal joints, said forefoot section having a first region for supporting the first, second, third, fourth and fifth metatarsal heads, associated phalanges and metatarsal phalangeal joints, and the metatarsal neck associated with the fifth metatarsal head, and a second region for supporting at least one of the metatarsal necks associated with the second and third metatarsal heads, said first region of the forefoot section having said first compressive resilience and said second region of the forefoot section having said second compressive resilience.

2. Footwear as set forth in claim 1 wherein at least part of the medial region of the heel section has said first compressive resilience.

3. Footwear as set forth in claim 1 wherein at least part of the medial region of the heel section has said second compressive resilience.

4. Footwear as set forth in claim 1 wherein said sole comprises a midsole, and wherein said footwear further comprises an outsole permanently attached to the midsole for engagement with the ground.

5. Footwear as set forth in claim 1 wherein said sole further comprises an outsole for engagement with the ground.

6. Footwear comprising a sole having:

5 (a) a heel section for supporting a heel of the  
foot, said heel section having medial and lateral regions;

(b) an arch section forward of the heel section for supporting an arch of the foot, said arch section having medial and lateral regions; and

10 (c) a forefoot section forward of the arch section for supporting a ball of the foot including first, second, third, fourth and fifth metatarsal heads and associated metatarsal necks, proximal phalanges and metatarsal phalangeal joints, said forefoot section having  
15 a first region for supporting the first, second, third, fourth and fifth metatarsal heads, associated phalanges and metatarsal phalangeal joints, and the metatarsal neck associated with the fifth metatarsal head, and a second region for supporting at least one of the metatarsal necks  
20 associated with the second and third metatarsal heads;

25        said sole being constructed to have a first compressibly resilient portion for attenuating the shock of impact to the wearer during running and walking, and a second portion harder than said first portion for providing  
30        firm support for the foot during running and walking, said first portion comprising at least part of the lateral region of the heel section, at least part of the lateral region of the arch section, and the first region of the forefoot section, and said second portion comprising at least part of the medial region of the arch section and the second region of the forefoot section.

7. Footwear as set forth in claim 6 wherein said first portion further comprises at least part of the medial region of the heel section.

8. Footwear as set forth in claim 6 wherein said second portion further comprises at least part of the medial region of the heel section.

9. Footwear as set forth in claim 6 wherein said first resilient portion has a Type C durometer hardness of less than about 70, and wherein said second harder portion has a Type C durometer hardness of 50-85.

5        10. Footwear as set forth in claim 9 wherein said first resilient portion has a Type C durometer hardness in the range of about 40-60, and wherein said second harder portion has a Type C durometer hardness of about 75.

11. Footwear as set forth in claim 6 wherein said body of said first resilient portion is formed as a unitary body and wherein said second harder portion is

formed as a unitary body permanently bonded to said body of  
5 said first material.

12. Footwear as set forth in claim 6 wherein said sole comprises a midsole, and wherein said footwear further comprises an outsole permanently attached to the midsole for engagement with the ground.

13. Footwear as set forth in claim 6 wherein said sole further comprises an outsole for engagement with the ground.

14. Footwear as set forth in claim 6 wherein said first resilient portion located in the first region of the forefoot section and said second harder portion located in the second region of the forefoot section are configured to permit the first metatarsal neck and head of the foot to plantarflex relative to at least one of the second and third metatarsal heads during toe-off.

15. Footwear as set forth in claim 6 wherein the  
first and second regions of said forefoot section are  
defined by a boundary line which extends under the  
metatarsal necks associated with the first, second and  
third metatarsal heads.

16. A sole for footwear comprising:

(a) a heel section for supporting a heel of the foot, said heel section having medial and lateral regions;

(b) an arch section forward of the heel section for supporting an arch of the foot, said arch section having medial and lateral regions; and

(c) a forefoot section forward of the arch section for supporting a ball of the foot including first, second, third, fourth and fifth metatarsal heads and

10 associated metatarsal necks, proximal phalanges and metatarsal phalangeal joints, said forefoot section having a first region for supporting the first, second, third, fourth and fifth metatarsal heads, associated phalanges and metatarsal phalangeal joints, and the metatarsal neck associated with the fifth metatarsal head, and a second 15 region for supporting at least one of the metatarsal necks associated with the second and third metatarsal heads;

20        said sole having a first selected effective compression resistance in at least part of the lateral region of the heel section, at least part of the lateral region of the arch section, and the first region of the forefoot section, a second selected effective compression resistance greater than said first compression resistance in at least part of the medial region of the arch section

25        and the second region of the forefoot section, and a zone of weakness extending generally transversely with respect to the sole along a curve extending through locations generally corresponding to the five metatarsal phalangeal joints for providing greater flexibility for easier

30        articulation of the metatarsals relative to the phalanges of the foot.

17. A sole as set forth in claim 16 comprising an outsole having said second compression resistance, said outsole having a cavity formed therein at least partially occupied by an insert having said first compression resistance.

18. A sole as set forth in claim 17 wherein said insert has a shape resembling a numeral seven.

19. A sole as set forth in claim 16 wherein said first selected effective compression resistance extends

under the first proximal phalange and the first distal phalange.